Question 1: What will be printed by the code below?

```
x = 2
y = 3
x = y
y = x + y
print(y)
```

Question 2: What will be printed by the code below?

```
j = 0
for i in range(5):
    j = j + i*i
print(j)
```

Question 3: What will be printed by the code below?

```
sign = 1
for i in range(10, 1, -2):
    sign = -sign
    print(sign*i)
```

Question 4: What will be printed by the code below?

```
list = [5, 3, 4, 2]
list.sort()
b = list*2
b.pop(1)
print(b)
```

Question 5: What are the values in Python of the following?

```
a) 7/2
b) 7//2
c) 7%2
```

Question 6: What will be printed by the code below?

```
a = "afc"
b = "dg7k"
c = a + b
d = c[2: -2]
print(d)
```

Question 7: What will be printed by the code below?

```
price = 30
print("Price ${0:6.2f}".format(price),
      "\n  Tax ${0:6.2f}".format(price*0.08),
      "\nTotal ${0:6.2f}".format(price*1.08))
```

Question 8: What will be printed by the code below?

```
def add_twice(a, b):
    a = a + 2*b
    b = b + 2*a
    return a
a = 3
b = 2
a = add_twice(a, b)
print(a, b)
```

Question 9: What will be printed by the code below?

```
a = 12
b = 1
while a > 0:
    a = a - b
    b = b + 1
    print(a, b)
```

Question 10: What will be printed by the code below?

```
a = bool(0)
b = bool(1)
c = bool(2)
print((a and b) or (b and c))
```

Question 11:

There are earthlings, Martians, and robots working at a space station, and they are paid by the hour in energy credits, which are only issued in integer units. Write a program which prompts the user to enter lines like:

```
Edwin e 210
Bf6$k m 1900
Zurg r 930
R2D2 r 2000
JarJar m 20
Bianca e 812
```

which have three items, separated by spaces. The first is the employee's single name (only one name is used on the space station), the second is a lower case letter identifying the employee's race, with e, m, and r standing for earthling, Martian, and robot, respectively, and the third is the salary, in credits per hour. The user input is terminated by a blank line, from pressing just the enter key. The program should calculate and print the average salary for earthlings, Martians, and robots.

Question 12:

Revise the program for question 11 so that if the user enters a line of invalid input, the program detects this and, instead of crashing from the invalid data, continues to prompt the user for correct input until a correct line is entered. Things to check for validity are that the line contains exactly three items, separated by spaces (for example, if both first and last names for an earthling were entered, with a space between them, the line would have four items), that the second item is either an e, and m, or an r, and nothing else, and that the third item is an integer.